



THOMAS G. NEWMAN,  
EDITOR.

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**The Bees** are daily winging  
Their way to distant fields,  
And from the sweet bloom bringing  
The treasures which it yields.

Oh, that we all were learning,  
If we the "prize" would win,  
To daily toil be turning,  
And constant work begin.  
—ANNA MILTONA.

Prof. A. J. Cook sustained quite a loss by fire on his farm in February.

**The Unusual** amount of warm weather during the winter months has kept the temperature in winter repositories so high that the aid of ice has been necessary quite frequently to cool the place.

**A Liberal** Premium List is presented for the Bee-Department of the Minnesota State Fair. The Secretary, Col. W. M. Liggett, of Hamline, Minn., will furnish Premium List and information on application.

The *Apiculturist* for April is on our desk. It is, as usual, filled with spicy reading for bee-keepers. The *Apiculturist* is fully up with the times, and it is a pleasure to read every copy as it comes to hand. It richly deserves its success.

**A Fire** destroyed the factory of G. B. Lewis & Co., at Watertown, Wis., on Saturday, April 19. The origin of the fire is unknown. Loss, \$15,000, with an insurance of \$4,500. This is a heavy blow for the enterprising firm, for their stock of hives and sections were all destroyed; but their well-known enterprise and vim will soon find new quarters and adequate machinery to resume business in the shortest possible time.

**The Canadian Tariff Revision** is being made, and the *Canadian Bee Journal* justly complains of its "honey" item. It says:

In the revised tariff just submitted to the Dominion Parliament by the Minister of Finance, the following paragraph appears:

"70. Honey and imitations thereof in the comb or otherwise, three cents per pound."

It seems to us that if we allow this to become embodied into the tariff, permanently, that we will be tacitly admitting that there is such a thing as "imitation" honey. This is especially bad in the case of "comb honey," because no such thing as "imitation" comb honey has ever been made or offered for sale. We are forced to admit there are adulterations of honey in its extracted form, but the wording of the paragraph can be changed to suit the case much better, as follows: "Honey in the comb, or extracted and adulterations thereof."

It is all-important to watch the actions of those who know nothing of honey-production. They are so liable to make mistakes, which are full of danger to the pursuit—especially when they presume to legislate about it. Keep them to the mark, and thus compel them to do justice to honey-producers.

**The Work of the Cyclone** in the apiary of E. Drane, of Eminence, Ky., was graphically set before our readers in a letter on page 253. Mr. Drane gives further particulars in a letter dated on April 14, 1890. He says:

It was thirteen buildings destroyed, not three. The brick smoke-house only had the roof, gable, and part of one wall blown off. The poultry-house escaped with half the roof off and several holes shot by flying timbers from shop and honey-house. There were nearly four miles of fences wrecked. I believe there are 100 wagon loads of kindling wood, less than two feet long, on our farm. Thousands of people who have seen the wreck, say that they never saw anything to equal it. E. DRANE.

Mr. Drane has sent us a photograph of the apiary, taken since the cyclone's visit to it, which shows the terrible work done by it. Large trees were torn to pieces, and others taken up by the roots. Buildings, hives, and everything in the apiary were tossed about as if they were matches, and scattered promiscuously about. The photo is placed in our office Album.

**Honey-Dew**, so-called, for winter stores for bees has been tested by Mr. Ira Barber, of De Kalb Junction, N. Y., and he has made the following report, dated April 17, 1890:

According to promise, I will give the condition of the bees, after living on "bug-juice" for five months, for quite a number of them had nothing to live on but that. All that had queens have wintered in fine condition. Four colonies out of the 140 were queenless, and failed to winter. Many of the hives are quite badly soiled on the outside, but no damage is done. The timber that the bugs and bees frequented in this locality, was swamp-elm. The temperature that the bees were wintered in, was from 46 to 56 degrees. IRA BARBER.

**Japan.**—The Secretary of Agriculture has just been advised by the Secretary of the State, that by the courtesy of the Imperial Government of Japan at Washington, the Japanese Charge' d' Affaires, Mr. Aimaro Sato, has placed at the disposal of the American government, some invitations to the Agricultural and Industrial Exposition which has just opened at Tokio, and will be continued until July 31.

These invitations are extended through the Minister of Agriculture and Commerce of Japan, and entitle the recipients to special privileges in connection with the Exposition, and as regards traveling in all parts of the Empire. They would unquestionably serve as most valuable passports to American visitors, seeking to acquaint themselves with the agricultural and industrial resources of Japan, and to extend American trade in that direction.

**California Honey Crop.**—In conversation with an experienced bee-keeper a few days ago, he said it was a fortunate thing that bees had stings; if it was not so everybody would be keeping bees, and they would be as plentiful as the common house-fly; and honey would be so plentiful that it would be sticking to everything; that the world would get tired of it and exterminate the bees to get rid of the honey. Perhaps there is some ground for our friend's remarks, but unless there is a change in our climatic conditions there will be no surplus of honey to grieve over in Southern California this year. Continued rains, cold nights, and an abundance of snow in the mountains in March, are not such surroundings as are calculated to make an abundant honey harvest.—*Exch.*

**The Report of the New York State Bee-Keepers' Convention** held last February, is printed in pamphlet form. A copy of it has just been received by mail. It contains 24 pages, and is a fair report of the meeting—though not a full one. A copy of it may be obtained of the Secretary, G. H. Knickerbocker, of Pine Plains, N. Y., for 10 cents.

This Association was founded by the late M. Quinby, in 1868.

A new pamphlet is on our desk, entitled "Pratt's New System of Nuclei Management." It contains 10 pages, and is issued by E. L. Pratt, of Marlboro, Mass. He details his nuclei system of management, and experiments with Carniolan bees. He does not say so, but we presume it is intended as his Circular and Price List for 1890. All those interested should send for a copy.

**An Early Swarm** is reported at Palmyra, Ills., on the 7th inst., by Warren Smith. The bees clustered on a tree. He hived them and gave them a frame of honey, but they were robbed. Mr. E. H. Groh, of Dixon, Ills., reports that his bees were gathering pollen all day on April 18. Since, it has been quite cold in northern Ills.

## GLEAMS OF NEWS.

### Trees for Shade and Honey.—

The importance of planting trees for the rector which some of them so profusely yield, as well as for their grateful shade and general attractiveness, should not escape the attention of all bee-keepers who desire to extend their fields of honey-producing blooms. Especially should this subject of tree-planting be thoughtfully considered by apiarists, when they have been so forcibly reminded that the unexcelled rector-bearing tree—the precious linden or basswood—is fast disappearing under the woodman's ruthless axe.

Let every one interested in securing the largest measure of success from his own, and the efforts of his bees, see to it that, among others, the lindens are freely planted to grace the walks of home or town, and to supply their delicious sweetness for the "busy bee's" delight, and its keeper's profit.

The following paragraph, relating to this matter of growing trees by bee-keepers, are excerpted from the *Rural Californian*:

Every bee-keeper is interested in forestry, whether he knows it or not. The presence of trees, whether large or small, protects the surface of the earth from the intense and scorching rays of the sun in summer, prevents the evaporation of moisture occasioned by rainfall, and also prevents the rapid absorption of moisture at the roots and rootlets of trees, obstructing the descent of water, and causing it to be held so that it percolates through the soil and rocks, storing it for use in streams, as well as for evaporation in the atmosphere.

Much of the nectar gathered by the bees comes from the bloom of trees and shrubs. The oak, sycamore, locust, willow, blue-gum, acacia and manzanita are all good honey-producers; while the sages are the best of all. But other trees that produce no nectar-bearing bloom, are useful in tempering the atmosphere, creating that humidity that is essential to the secreting of nectar in flowers, whether growing trees or plants. Besides, trees are wind-breaks, sheltering from the sweeping blasts that come down from the north, lapping up the moisture in the earth when unmolested, and increasing in velocity as they drive over barren mountain sides, valley and plains.

Then let the bee-keeper plant trees, being assured that he gathers wealth from each swaying branch, and every sturdy trunk and root of the trees that ornament and beautify our landscape.

**It is Foolish** to send circulars to a list of names that have been copied from old copies of Journals. Many of such have changed their addresses, and some are dead. We know of one who has been dead for several years, but the usual batch of circulars come through the mails every year, and are consigned to the wastebasket. The best way is to advertise in a *live* Journal which has the newest addresses regularly. Sending to old addresses is wasteful economy.

### Good Queens in the Spring.—

Mr. L. H. Wilcox, of Hastings, Minn., gives this excellent advice and caution in the *Farm, Stock and Home* for last week:

In expanding the brood-nest to accommodate the increasing numbers of bees be careful to give no more room than will be occupied and kept warm by them, usually one or two combs at a time is all we can add with safety, and they should be placed in the center of the nest, with the filled combs of brood on each side, and honey outside of all.

If we get the queen to laying well at an early date by providing the necessary warmth and stimulative feeding, we may expect by the middle of May to have from 1,500 to 2,000 bees hatching daily, and these will be of just the right age to secure the crop of white clover honey from this time on. If we are sure they have a good queen the brood-nest will require but little attention until it is time to take them in hand to prevent swarming, of which we will speak later on.

During our spring examinations we always expect to find about one queen in four or five that from age, incapacity or other cause, fails to produce sufficient eggs for best results; these were sometimes exchanged with a weak colony that has a young and vigorous queen; but usually we simply mark the hive, and as soon as we can rear our first young queens ready to introduce, off comes the "old lady's" head.

This is a matter generally neglected by our best bee-keepers, and always by the more negligent ones; yet it is so important that it often makes 25 per cent. difference in the yield of an apiary, and every man who keeps fine colonies can well afford to rear and keep on hand a few extra queens, while to the large apiarist it is indispensable to successful work.

To illustrate this point: One of our most expert bee-keepers, Rev. Alex. Telford, told me that while his whole apiary of 38 colonies averaged 126 pounds of surplus each, 12 of them did not give anything, and he ascribed it to the condition of their queens.

The danger period is during the month of April; our little workers have lain semi-dormant through the long winter, eating but little, often not more than four or five pounds per colony; but when they commence active brood-rearing, they require a large amount of food, and if the weather is unfavorable, as it was in the spring of 1889, will frequently starve to death before we realize their danger. So to the skillful care they receive at this time, we largely owe their subsequent prosperous condition.

**Bee-Escapes.**—Mrs. L. Harrison has this to say in the *Prairie Farmer* about bee-escapes and their use:

These are "the latest fad," and are receiving much polite attention from the bee-keeping world. It appears to me as though "Barkis is willin'," and that honey-producers will accept them and put them into practical use in their apiaries.

When honey is coming in, an empty case of sections is put on, then the "escape," and above it the finished sections containing the bees. If an empty case of sections is placed under the finished one without any "escape," many bees will remain there when it would be an advantage to have them working in the empty case.

During a rush of work in the apiary, the finished sections could remain upon the hive, and it would be better to leave them there, as the heat arising from the bees would aid in curing it.

### The World's Fair Bee-Exhibit.

—Mr. J. E. Pond, of North Attleboro, Mass., writes as follows about the bee-exhibit at the World's Fair:

Chicago is to have the World's Fair, if a location can be found. Has any stir, as yet, been made in regard to "bee-exhibits?" I presume that an exhibit will be made, and, on such a time and occasion, a big attempt should be made, or none, as we must show the world (if we show at all) that we are away ahead of all competitors. The West is the real ground for bee-industries. In the East, we produce but little honey, comparatively, still we wish the business to be boomed. By-and-by, when science plays a greater part than now—when the majority of our bee-keepers know something of entomology and natural laws—then bee-keeping will take a position among the other industries that will be firm and enduring. J. E. POND.

Dr. A. B. Mason has full charge of the whole matter, and as soon as the final work in the Senate is done, and the President has signed the Bill, then full arrangements will be made for a grand bee-exhibit.

### Increase and the Honey-Flow.

—A correspondent sends the following questions for reply:

1. Will it affect the honey-flow if I take one or two combs out of a populous colony to make a nucleus about May 1? My locality depends upon white clover and basswood.
2. Please give the best method for securing increase, without lessening the honey-flow.

Dr. C. C. Miller, of Marengo, Ills., answers the above queries thus:

1. No; it will not affect the honey-flow in the slightest degree, but it *will* affect—and affect greatly—the amount of surplus honey secured.
2. I know of no method of increase that will not interfere with the honey crop, unless surplus can be obtained from something later than clover or basswood. I would rather take one or more colonies for increase entirely, and not weaken any intended for storing. C. C. MILLER.

**Appreciated.**—The editor of *Home and Country*, New York, thus mentions our monthly:

The ILLUSTRATED HOME JOURNAL has been recently paying our sanctum a visit, and we have become so interested in its pages that we hope it will come regularly in the future. It is a handsome magazine, nicely illustrated and published for only \$1 a year; though fit to grace the parlor, study, or other retreat, of any household in the Union.

**Francesco Crispi**, the Italian Premier, is undoubtedly, since the retirement of Bismarck from the Chancellorship of the German Empire, the most potent and picturesque figure in European politics. A striking portrait of the Sicilian statesman is given in "Frank Leslie's Popular Monthly" for May, with a very interesting article entitled "Signor Crispi and the Italian Chamber," by the Hon. George Makepeace Towle.

## QUERIES REPLIES.

### Bee-Space Between Sections When Tiering-Up.

Written for the American Bee Journal

**Query 703.**—Why is it necessary to have a bee-space between the sections in tiering up?—Illinois.

It is desirable.—A. J. COOK.

It is not necessary.—DADANT & SON.

It keeps them from being propolized.—A. B. MASON.

To prevent propolis on the sections, and killing bees.—C. C. MILLER.

It is not necessary, but it is more convenient to have the spaces.—G. L. TINKER.

Perhaps by having a bee-space, the upper tier will have combs better joined to the bottoms of the sections.—M. MAHIN.

It is more convenient, keeps the sections freer from propolis, and prevents the crushing of bees.—R. L. TAYLOR.

To facilitate the passage of the bees, and to prevent them from propolizing the sections.—MRS. L. HARRISON.

So that the bees will not glue the whole thing together; and to prevent killing bees in manipulation.—G. M. DOOLITTLE.

A "bee-space" between the sections is not absolutely essential; but a *bee-passage* way is necessary for the bees to pass from one tier to the other.—J. P. H. BROWN.

To prevent the bees from gluing the sections together, and to give free circulation of bees, etc., to all parts of the sections.—J. M. HAMBAUGH.

I do not know that it is, but I always do, because I like the plan. I can tier up faster, because I do not have to smoke the bees so much to drive them out of the way.—EUGENE SECOR.

I do not see any necessity, but perhaps I do not understand the question. I always put the sections on top of each other, without a space, and I suppose that is the rule.—J. E. POND.

Just try tiering up awhile, and you will find out! Bees have a faculty of getting in the way, and if no bee space is arranged, many bees would be crushed, even with the most careful handling.—C. H. DIBBERN.

In my yard last season I had about 40 hives with a bee-space above or between the cases, and 20 with no space, the slats in the upper case resting on the lower sections, and I could see no difference in the honey. You can work faster and kill no bees, if you have a bee-space of 5-16 of an inch.—H. D. CUTTING.

So that the supers may be easier handled. A slatted honey-board over the frames will be fastened to the frames, but the super with a bee-space between it and the honey-board, will not be fastened, except with a little propolis around the edges, where the parts touch. I like all supers to have a bee-space above and below the sections, so that when removed from the hive, it may be put upon a board without crushing bees, and made secure from robbers.—J. M. SHUCK.

I can see in practical work as well as in theory, a great many reasons why there should be a bee-space between all the departments of the hive when tiering up. If there was no bee-space, hundreds of bees would be smashed every time a section-case was placed on a hive; and if it was possible to smoke all the bees out of the way, so as not to kill any of them, the

bees would glue the bottoms of the section-cases fast to the tops of the brood-frames, or whatever it was made to rest on, if no bee-space intervened. It will not do to talk about doing away with the bee-space.—G. W. DEMAREE.

It is not absolutely necessary to have a bee-space between the sections in tiering up; however, there are slight objections to having the sections rest upon each other. Some of them may be enumerated even in the short space allowed in this department. We just now call to mind—glue, stings, mashed bees, annoyance, bottoms of sections half pulled off—and a few other little things like that. The bee-space will save all this, and about three-fourths of the time which would be expended in manipulating the hives; but if you are keeping bees for the fun of it, never mind about the time and annoyance.—JAMES HEDDON.

It is desirable, if not absolutely essential, and prevents the destruction of bees and the deposit of propolis there.—THE EDITOR.

### Distance Hives Should be from the Cellar Bottom.

Written for the American Bee Journal

**Query 704.**—How far from the ground should the hives be placed in a dry cellar, when wintering bees?—Minnesota.

About one foot.—G. L. TINKER.

From one to two feet.—J. P. H. BROWN.

Ten or twelve inches.—R. L. TAYLOR.

Perhaps twelve inches is far enough.—M. MAHIN.

From six to ten inches.—MRS. L. HARRISON.

Eighteen inches to two feet.—J. M. HAMBAUGH.

Not nearer than five or six inches.—J. E. POND.

A foot or two; but we have wintered bees fairly in hives not over six inches from the ground.—DADANT & SON.

Four inches, or just so that the air can circulate well beneath.—A. J. COOK.

In my cellar the bottom tier is six inches from the floor to the entrance, four tiers high.—H. D. CUTTING.

As a matter of convenience, mine are about four inches. More, I think, would be better.—C. C. MILLER.

I raise the lowest tier of hives nine inches from the bottom.—G. M. DOOLITTLE.

I presume about 12 inches would be safe, but my experience with cellar-wintering of bees is limited, and entirely experimental.—G. W. DEMAREE.

I do not know; but the lowest tier of mine is 8 inches from the ground, and the top tier about 6 feet.—A. B. MASON.

I doubt if any arbitrary rule can be laid down. It depends upon the cellar. I place mine about a foot from the bottom, but I do not know that it is necessary.—EUGENE SECOR.

High enough so that the temperature of the atmosphere in which the hive stands, will not fall below 45 degrees, Fahr. The floor of the cellar is likely to be the coldest part of it.—J. M. SHUCK.

The hives ought to stand not less than a foot from the floor. I have placed them as low as 4 inches, but the lower hives seem to winter with more loss than those placed from 2 to 4 feet high.—C. H. DIBBERN.

If the cellar has no bottom either of cement, wood or anything else, the hives should be placed somewhere from an inch

to 8 feet, according to conditions, and how liable the bees are to die with the bee-diarrhea.—JAMES HEDDON.

They should be high enough to allow a circulation of air—say 6 inches or more, according to the size of the cellar and the number of colonies to be put into it.—THE EDITOR.

### Wood for Feeder Bottoms.—A correspondent sends this question for reply in the BEE JOURNAL:

Will Mr. James Heddon please state what he considers the best kind of wood, and thickness, for the bottoms of his large feeders?

Mr. Heddon answers the above query as follows:

Either whitewood, basswood or pine will do very well for the bottoms of my feeders. Almost any wood—the lighter the better—will work all right for the following reasons:

1. We thoroughly paint the feeder inside and out, bottom and all—not the divisions, but simply the case proper, or box, before the divisions are put in, which, of course, will include the bottom-board.

2. A very important feature, is that the bottom-board comes within the sides and end pieces, and the whole is made of just such a size that if any leaking should take place, in or between the bottom and the sides and end pieces, it could not leak anywhere except inside the hive.

**Cones of Honey.**—There is something new popping up every now and then in the honey market reports. Some few years ago these report-makers insisted on reporting strained-honey as in the market, when there was not a pound of strained honey to be found in the California market. With the market-reporter all honey not in the comb was strained honey, and the extractor and extracted honey was a fiction fabricated by the bee-keeper. Next came the "warranted, guaranteed strictly pure," orange-blossom honey. The market reporter rolls this sweet quotation under and over his commercial tongue with much gusto, and it will doubtless serve him a long time, but it is pure humbug all the same. But to the Los Angeles Times market reporter—Pasadena edition—belongs the discovery of "Honey, 1-pound cones, 15 cents; 2-pound cones, 30 and 35 cents." Happy Pasadena! As far as we know that city has the pure and only original honey cones in the world. What next!—Rural Californian.

### Convention Notices.

The next meeting of the Carolina Bee-keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, Sec.

The spring meeting of the Northern Illinois Bee-keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ill., on May 20th, 1890. D. A. FULLER, Sec.

The next regular meeting of the Northwestern Wisconsin Bee-keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m. BENJ. E. RICE, Sec.

The 12th annual session of the Texas State Bee-keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited. J. N. HUNTER, Sec.

The spring meeting of the Capital Bee-keepers' Association, will be held in the Supervisor's Room of the Court House at Springfield, Ill., at 10 a.m., on May 7, 1890. The following subjects will be discussed: "Production and Care of Comb Honey," by Jas. A. Stone; "Prevention of After-Swarms," by A. Lewis; and "Creating a Home Market," by G. F. Robbins. All interested are cordially invited to attend. C. E. YOCOM, Sec.

## CORRESPONDENCE.

### WINTERING.

#### Preparing Bees for Winter—A Simple Bee-Feeder.

*Written for the American Bee Journal*  
BY ROBERT CARVER.

In this part of the country, the season of 1889 was a poor one, as far as surplus honey was concerned, many of the colonies putting in none at all, and not only so, but when time to pack for winter, many of them were short of stores; to make up this deficiency, I fed the weak colonies with the overplus from the supers of the best colonies, and about 500 pounds of confectioner's standard A sugar, and so put them in condition, as I thought, to last them until March.

I packed them in boxes on the summer stands, four hives in a box, two facing the east, and two facing the west, alternately. My hives are all of the same pattern, 8-frames about 8x16½ inches; over each hive I put a case of chaff about five inches deep, and the same size of the hive, with a cloth bottom to come next to the bees; but before placing the case over the bees, I lay two strips of wood about ¾-inch thick across the frames to hold the chaff up, so that the bees can pass over from one frame to another to get their stores. These strips of wood should be nearly two inches apart. I then put the board cover on top of the chaff case—the upper end of the cover to be held up from the case about the thickness of a shingle-nail, so that the sweat and dampness can escape from the chaff. Then all over and around these, I pack with dry planer-shavings from 4 to 6 inches thick, then over all I put a good double-board cover, which makes them secure, except at the entrance.

From the hive to the outside of the box I leave an entrance-way 3 inches wide by ¾-inch deep, which is left open all winter. I next put on a storm-porch on each side of the box, long enough to cover the entrance of both hives, and giving the bees an air-space of nearly one cubic foot of space for each hive, and tight enough so that the bees cannot get out, and snow and mice cannot get in.

The bottom of the storm-porch is about an inch lower than the entrance-way, so the bees can carry out their dead and drop them down into the porch; and the bees can walk out in moderate weather.

Next, I cut a nicely-fitting hand-hole in front of each hive, so the apiarist

can open occasionally to keep the entrance clear of dead bees, or to give the bees a flight, and to close the bees in during bad weather in the spring, when it is not safe for them to fly.

I have had doubts as to whether bees need water in winter confinement, when they are kept in without an opportunity of a flight from November until April, but I think that I have proved the fact that they will do well confined for that length of time.

I packed my bees last fall about the last week in October, and closed them in about the middle of November, and they were not out again until April 2, 1890. I had, after selling a few colonies, 217 colonies, fall count, some of which were put into winter quarters quite light as far as food was concerned; and March being the hardest month of the winter, it was difficult to get at them in that month, so I let them go until April; the result was that several colonies run out of food and died, a few others proved to be queenless, so they are quite light, but aside from these, I have about 190 promising colonies, except that many of them will need to be fed some to bring them through to flowers.

I am now feeding nearly 200 colonies each day, and for the benefit of some one, who, like myself, may at some future time be under the necessity of feeding, I will describe a cheap feeder which I am using, and I must say that, after using various kinds and styles of feeders, at quite an expense of time and labor, this gives the best satisfaction for early feeding, of any that I have used.

It is simply a shallow tin dish, 3½ inches long by 2 inches wide, and ½ inch deep; placed across the frames over the bees, and under the chaff case, with a strip of wood laid across the top of the dish from end to end to hold up the cloth, so the bees can have free access to it.

After the dish is placed, and the case adjusted properly, to get the food into it I used this plan: I had on hand some sap-spiles about 4 inches long, made of maple timber, and turned to drive after a ⅝-inch bit, with a hole bored through the spile about the size of a cell of worker-comb. I then took a piece of paste-board about 1½ inches square, through which a ⅝-inch hole had been bored; the spile will project through this paste-board about ½ inch. Now remove the chaff down to the feeder, cut a hole through the cloth close to the ½-inch piece that is laid over the dish or feeder, put the spile through the cloth, with the paste-board resting on the piece that is laid across and over the cloth. Pack the chaff around the spile, and it is done.

Next, have a large spring-bottom oil-can, and a tea-pot full of hot syrup—as hot as can be, and not burn the bees. I use a common market-basket to carry them in, so that I can set them down to raise and lower the cover to the box as I go along (I have fed 32 colonies in 16 minutes, including opening and closing the covers). Have a short piece of wire to reach down into the feeder of very weak or doubtful colonies, to ascertain whether they have eaten it up clean. All good colonies will devour it in a hurry. A little testing of the "can" before you begin, will tell you the quantity that you want in each feeder.

Manton, Mich., April 9, 1890.

### SUPERS.

#### A New Super for the Open-Side Sections.

*Written for the American Bee Journal*  
BY JOSHUA BULL.

On page 232, Mr. M. M. Baldrige calls "for something better than what we have been using" in the line of section supers. Now I would like to say to all interested in this subject, that I use a super (a device of my own), which I call "The Victoria Super;" it combines nearly all the features which Mr. B. mentions as desirable, and one important point which he does not speak of, and may not have thought of, viz: It is especially adapted to the use of open-side sections.

This super is provided with slats in the bottom for the sections to rest upon, the bottom slats being made just the pattern of a one-piece section before it is folded up, so that when the sections rest upon them in the super, the bottom of the section is completely protected from the bees; then by means of "followers" in one side and one end, and thumb-screws to adjust them, the sections are tightly pressed together, both sidewise and endwise, so that it is not possible for the bees to inject any propolis between them.

Every section is held perfectly true and square, and so firmly in place that the super can be turned bottom upwards, and tumbled around in almost any shape, and the sections will not move nor get out of place. The sections are completely protected from the bees on all sides, except the top. It can be used with or without separators, at the option of the operator.

The Victoria super was first devised for the express use of open-side sections, but it is equally well adapted to any other kind. When open-side sec-

tions are used, it allows a bee-passage all around the outside of the sections, thus obviating the difficulty of the sections being glued to the ends of the super.

When the sections are to be taken out, just loosen the thumb-screws, remove the followers, and then the sections can be lifted out at leisure without the slightest danger of injuring the comb.

I have used these supers the past two seasons; and I think that there is nothing like them. I do not make any to sell; they are not patented, and everybody is at liberty to make and use as many as they wish, and the more they are used the better I shall feel pleased. I sent one of these supers to the International Bee-Keepers' Convention at Brantford, Ont., last December, in order that those who attended that meeting might see how it is constructed, and make and use them if they desired to do so. I wish Mr. Baldrige would give them a trial.

Seymour, Wis.

## LARGE HIVES.

### Bee-Culture and Bee-Keeping— the Difference.

Written for the American Bee Journal  
BY D. MILLARD.

A great many people seem to have an idea that bees will not only work for nothing and board themselves, but will, if furnished with what Josh Billings would have called "an automatic, self-adjusting, non-swarming, ever-controllable bee-hive," leave their owners nothing to do but to crate the honey, as the hive and bees will discharge the filled sections, as would an ordinary brick-machine.

Again, others seem to think that all that is required is one kind of a repository of the capacity of an ordinary freight car, that while the bees are filling in at one end, they can be unloading at the other—no theoretical knowledge or practical experience being required, and just manual labor sufficient for healthful exercise!

Prof. Cook has said that there is a vast difference between being a *bee-keeper* and a *bee-culturist*. If one has no desire to become a practical apiculturist, but merely wishes to keep bees, a huge box, or honey-house, as described on page 203, is perhaps all that is needed. If the season is favorable, he will probably get some honey without much effort on his part; but if the season is unfavorable, he will get neither honey nor increase. I experimented with such a hive 40 years ago, and, as Mr. Heddon says, one trial proved sufficient.

### CUPBOARD BEE-HIVES.

There are a great many such hives in use in this vicinity at the present day. They are called "cupboards," as they have a door in one side, with a glass panel, and a knob attached, that gives them the appearance of a piece of dining-room furniture. It has openings through the upper side, over which are placed surplus boxes, which, strange to say, are sometimes occupied and filled, or partly so.

It has 16 frames below, that might barely be considered movable; they are 15½ inches deep, by 10½ inches wide, with a horizontal cross-bar placed a little below the centre of the frame, beneath which is usually built only drone-comb. They are usually put in the upper room of a dwelling-house or wood-shed, with an opening through the wall for the bees to pass in and out.

These hives have been pronounced as non-swarming, which is true with some, but in a good season the bees in a majority of them swarm out from once to four times.

I have often been asked by some admirer of these "cupboards," for my opinion of them; and not infrequently it would be received unpleasantly, if ever so kindly given. Over three years ago I sent a description of one to a bee-paper, asking advice as to its probable utility for securing comb honey, hoping thus to get an opinion through the query column, which would somewhat relieve me; but the editor sent it back with a big "NO! the shallower the frames, the better;" thinking, no doubt, that the question was of too little importance to give it further attention. Nevertheless, nearly 500 such hives are now in use in this county alone, and by nearly that number of single individuals, who are mostly farmers, and seldom keep more than one colony to each farm; yet a majority of these men pronounce them a success, or at least they prove satisfactory to them, and I doubt if half a dozen of the whole 500 ever take a bee-paper of any kind.

These hives are all manufactured and sold by a man living in this State, who has been in the business for over 20 years. A near neighbor of mine has had one in continual use for about that length of time, and his bees of to-day are all descendants of his first queen. He usually secures some surplus honey, and breeds up bees enough that ought to secure him three or four times as much more, and would, were it not stored in the huge brood-chamber below. This extra amount of stores, together with the vast amount of space, for which there is no provisions made for reducing, all to be kept warm, often proves too much for

the bees. The cluster becomes too much spread, and the outer bees chill and fall to the bottom, until in the spring the colony is reduced to, or below, the size of an ordinary colony, when they slowly re-build again. There has been an unnecessary amount of stores, together with too large a space for the capacity of the queen. This extra amount of stores is carried over and soiled until unfit for anything but the bees; whereas, it should have been stored where it could have been taken off as surplus, and the bees wintered in less space. If they die out, as they often do, another swarm is hived upon the same old combs, a large portion of which is store or drone comb; and which the peculiar construction of the hive has made it impossible to remove.

Another great objection to this system of bee-keeping is this: The worse than useless rearing of so many drones, all of which perhaps are from an inferior queen, with no possible way to get at and displace, any more than would be with a log gum. This immense amount of inferior drones, more or less affects the grade of all the bees for miles around, thus making thorough bee-culture practically impossible within their range.

Mendon, Mich.

## PRIZE ESSAY.

### Extracted Honey—Its Production, Use and Sale.

Written for the American Bee Journal  
BY S. L. WATKINS.

Extracted honey is one of Nature's purest sweets—it is the pure liquid honey, just as it comes from the flowers. By the present methods of management, and the use of the honey-extractor, the honey is separated from the virgin combs without heat, or pressure. There are no dead bees, no crushed brood, pollen, or bee-bread—nothing but the clear, pure honey, just as it is taken from the flowers by the bees, entirely free from all taste of bee-bread, and foreign substances.

The antique method of taking the honey from the combs was really a compound of pollen, young bees, bee-stings, etc. It is quite easy to see how unhealthy honey obtained in this manner would be.

To extract the honey, the comb is taken from the hive, the bees shaken, or brushed off, and the comb then taken to the extractor, uncapped, with a knife made especially for that purpose; two to four frames, according to the size of the extractor, are placed

in at a time; the crank is turned around a few times, and the honey is thrown from the combs by means of centrifugal force, without injuring the combs; the combs are reversed, so that the other side may receive a similar "whirl."

The combs are now ready to be returned to the hives. Thus the combs are saved, and bees waste no time or honey in constructing new ones.

From recent experiments, it is conceded that it requires from 12 to 15 pounds of honey to make one pound of wax, thus it is plainly seen that the use of the honey-extractor saved the 15 pounds of honey required for wax, to say nothing at all of the time consumed. Again, the honey obtained in this way is perfectly pure, consequently it is more pure than even comb honey—the wax in comb honey, it is said on good authority, being indigestible.

Extracted honey can be put to a great many uses; it is equal, or even better, so a great many claim, than sugar for preserving fruits.

Honey is a true brain and nerve tonic; it favors the cure of all pulmonary diseases, coughs, colds, etc.; it is invaluable for making cakes, cookies, puddings, pies, cooking green and dried fruit, making vinegar, beverages, etc.

Honey is now used to a great extent in manufacturing a great many different kinds of candies; also for preserving meat. It would be difficult to think of anything more strengthening and nourishing than this product, fresh from Nature's laboratory.

The many uses to which honey may be put are too numerous to mention in a single article. The use of extracted honey is becoming world-wide.

One of the greatest secrets in the extracted-honey business, is to have all of the extracted honey thoroughly ripened before putting it on the market. A great many have destroyed their home market, by selling green, or unripened, honey. Honey ripened in the hive is far better than that ripened artificially; it preserves the delicate aroma better, and it is quite easy to distinguish the source of bloom from which it was gathered. In this climate it requires from two to four weeks to ripen sufficient before taking it off.

Honey that contains a great percentage of water, requires a longer time to ripen. Honey that has been gathered from the various wild sages of California, when properly ripened, has a sparkling clearness, and the flavor is pure and exquisite.

Honey gathered from the many varieties of penny-royal, and some of the species of mints, has a strong,

aromatic flavor, so as to be somewhat objectionable. New, or unripened honey, sometimes has a disagreeable odor and taste.

#### PACKAGES FOR EXTRACTED HONEY.

Stone crocks, or jars, are splendid to keep extracted honey in, if you are going to keep it any length of time; and if it candies, it can be easily cut out at any time when wanted.

I always draw the honey out of my honey-tanks into small glass jars, and five and ten pound cans, before it starts to candy.

A great many kinds of honey will candy sooner or later—in fact, that is one of the best evidences of its purity; adulterated honey will not candy. To bring it to the liquid form, after it has candied, heat the can slowly, by placing it in a vessel of warm water—not too hot, so as to scald it—and in a few moments it will return to the liquid form.

Extracted honey, to sell well, should be put up in neat, attractive packages—the fine appearance of an article is sometimes half its sale. The Mason and Muth jars are fine for retailing extracted honey in the home market.

In California, in most of the large apiaries, the honey is run from the extractor into tanks, holding from 1,000 to 20,000 pounds.

After the honey is settled, and if the producer intends to dispose of much of it in his home market, he draws it off into five and ten pound cans; but if he intends to ship it any distance, he uses the 60-pound cans, two in a case, as shown on page 270.

Extracted honey should be kept in a dry, warm room; if the room is damp, it draws the moisture, which, in time, destroys the aroma, and makes the honey thin and watery.

The past was an "off year" in the extracted honey business here. On account of a short crop, prices have ranged from 25 to 50 per cent. better; so that producers who have secured half a crop, have made pretty satisfactory returns.

One thing can be said in favor of California honey, viz: Nineteen out of twenty cases are absolutely pure honey. Extracted honey is at such a reasonable price that there is nothing that it can be adulterated with, that would pay to do so.

The honey produced in California is, without doubt, the finest in the world, both as regards color and flavor. Notwithstanding the discouragements of dry seasons now and then, the extracted-honey business is bound to increase. The honey crop in this State for the year 1889, was 1,092,900 pounds.

Placerville, Calif.

## OHIO.

### Report of the State Bee-Keepers' Convention.

Written for the American Bee Journal  
BY MISS DEMA BENNETT.

The Ohio State Bee-Keepers' Association held its annual meeting in Cleveland, O., on Feb. 19 and 20, 1890.

Owing to the absence of the President, Mr. H. R. Boardman, and the Vice-President, John Calvert, the convention was called to order by the Secretary, Miss Dema Bennett, when, Dr. C. C. Miller, of Illinois, being present, he was called upon to preside until the arrival of the President.

Mr. F. A. Eaton was appointed Assistant Secretary.

The following is a list of those attending the convention:

Dr. C. C. Miller, Marengo, Ills.  
Dr. A. B. Mason, Auburndale, O.  
E. Hanchett, Cleveland, O.  
J. F. Moore, Rockaway, O.  
H. F. Moore, Rockaway, O.  
E. R. Root, Medina, O.  
F. G. Fenton, Bluffton, O.  
O. J. Terrell, North Ridgefield, O.  
N. T. Phelps, Kingsville, O.  
Marcus Holtz, Tiffin, O.  
J. S. Barb, Oakfield, O.  
N. Case, Orangeville, O.  
B. F. Jenkins, Willoughby, O.  
Dr. I. N. Noland, Independence, O.  
Bruce Hobbs, Danville, O.  
B. T. Bleasdale, Cleveland, O.  
C. A. Graves, Birmingham, O.  
J. R. Chaffee, Brecksville, O.  
C. R. Page, Streetsboro, O.  
C. A. Camp, Painesville, O.  
J. B. Hains, Bedford, O.  
M. E. Ellsworth, Hudson, O.  
Daniel Bishop, Harpersville, O.  
E. M. Johnson, Mentor, O.  
A. I. Root, Medina, O.  
O. J. Post, Chagrin Falls, O.  
F. A. Eaton, Bluffton, O.  
S. F. Newman, Norwalk, O.  
D. B. Lovett, Crestline, O.  
H. R. Boardman, East Townsend, O.  
Daniel White, New London, O.  
A. Webster, Painesville, O.  
Theo. F. Shephard, Cleveland, O.  
Asher M. Coe, Coe Ridge, O.  
Samuel Patterson, Berlin Heights, O.  
Dr. G. L. Tinker, New Philadelphia, O.  
Warren Pierce, Garrettsville, O.  
B. Wells, Fostoria, O.  
O. D. Newcomb, Burton, O.  
W. A. Biteman, Westminster, O.  
Chas. McClave, New London, O.  
H. M. Parker, Plymouth, O.  
G. V. E. Mellinger, Canton, O.  
B. H. Woodman, Painesville, O.  
C. H. Coon, New Lyme, O.  
A. R. Munn, Macedonia, O.  
Dr. H. Besse, Delaware, O.  
J. H. Smith, Canton, O.  
Geo. Spittler, Mostertown, Pa.  
S. M. Turner, Dempseytown, Pa.  
C. H. France, Erie, Pa.

#### LADIES.

Mrs. A. B. Mason, Auburndale, O.  
Mrs. A. I. Root, Medina, O.  
Mrs. E. R. Root, Medina, O.  
Mrs. J. B. Hains, Bedford, O.  
Mrs. B. T. Bleasdale, Cleveland, O.  
Mrs. H. F. Moore, Rockaway, O.  
Mrs. O. D. Newcomb, Burton, O.  
Mrs. P. Tremolin, Garrettsville, O.  
Mrs. Frank Foster, Cleveland, O.  
Mrs. E. M. Johnson, Mentor, O.  
Mrs. N. Case, Orangeville, O.  
Mrs. C. H. Eynon, Cleveland, O.  
Mrs. E. C. Smith, South Cleveland, O.  
Mrs. L. H. Brown, Bissells, O.  
Miss Hattie Brown, Bissells, O.  
Miss Constance Root, Medina, O.  
Miss Anna Johnson, Mentor, O.  
Miss Dema Bennett, Bedford, O.

The reading of the minutes of the last meeting was dispensed with, and the first essay, by H. D. Cutting, of Clinton, Mich., was called for, which, in the absence of its author, was read by the Secretary, as follows:

#### **Producing Comb and Extracted Honey in the Same Apiary.**

Locality is the first thing to be taken into consideration. Many localities produce honey dark in color the entire season. In this case, it is best to work entirely for extracted honey. In many localities honey comes in so slowly, that the bees will not get it in presentable shape for market; again, it is best to work entirely for extracted honey.

If in a good locality where white clover abounds, followed by basswood, and the bees bring in large quantities of honey every day during the honey-flow, then it is best to work for comb honey—provided you are adapted to run an apiary exclusively for comb honey.

I will venture the assertion, that not more than one honey-producer in ten, is qualified to produce and market comb honey successfully. Now this may seem strange to many, yet it is a fact. Go where you will, you will find slovenly honey-producers—persons not adapted to the handling of comb honey. When you find a man that has the assistance of a good woman, you will find comb honey in good shape for market. Almost invariably when you find a woman at the head of an apiary, you will find comb honey in fine condition—they are adapted to the production of comb honey.

If you go into an apiary during extracting time, and find a person with honey on his hands, plenty on his clothes, nearly as much on the floor as in the can, all implements daubed with honey, the handle to the extractor covered with honey, with no pan of water and cloth handy to clean up any honey out of place—then and there you will find a person not adapted to handle comb honey. If he should be so fortunate as to secure a good crop of honey, he would spoil it all with his manner of handling it; and this is not all—his honey would spoil the market for some more-favored comb-honey producer.

When honey is taken to the market with propolis on every section, with the producer's "trade mark" in the shape of dirty finger-marks on every package, then the dealer will see at a glance that it is not in proper condition, and he will give from two to three cents per pound under the regular market price. When the neat and tasty producers bring their product to market, they are met with—"I have just bought 75 pounds of Mr. So-and-

So, for so much;" and you are expected to take the same.

If persons who have no taste to have things look nice, would confine themselves to extracted honey, then the market for comb honey would be much better in many localities. If the persons working for extracted honey would confine themselves to that product, they can produce honey at a less cost per pound than where comb and extracted is produced in the same apiary. Each production has its own system, and they do not work well together.

I think that it is best to adopt one regular system, and work to that as nearly as circumstances will allow, bring "all things" to that system—have an object point and work to it, if you wish to succeed as a honey-producer; and always remember that "locality and circumstances" must govern in all cases.

H. D. CUTTING.

In the discussion which followed, Dr. Mason said that localities were so different in honey-resources, that it was hard to fix a rule. What would apply to one locality, would not apply to another. Work for comb honey when honey is coming in freely, and for extracted honey afterward. Get ready—get supplies in time.

A. I. Root—To produce comb honey especially—in fact, any honey—you must be ready in time.

Dr. Miller wants more supplies than he thinks he will need—better have some left over than to be short when needed.

J. B. Hains produces about one-third comb honey, and two-thirds extracted. He always has the best results in working for comb honey in the flush of the honey-flow; after that he takes off the sections and uses the extractor. This prevents having a lot of unfinished sections at the close of the season. He works the home apiary for extracted honey and queen-rearing; prefers light-colored combs, as the honey will be nicer—dark brood-combs will make the honey darker. We must be ready for the season in advance.

Dr. Mason uses old combs in extracting, and says that his honey is A No. 1.

J. F. Moore produces about one-fourth comb honey, and the rest extracted. It takes more time to work for comb honey. If he works for that alone, the bees will swarm more. Some customers want comb honey, and some want extracted, and by working for both, we can please both classes of patrons.

H. F. Moore—It gives a man a better name where he produces both kinds

of honey. People have confidence in a comb-honey producer, that they do not have when he has only extracted honey for sale.

It was generally agreed that the main point was to be ready for the honey-flow when it comes. Three-fourths of those present produce both comb and extracted honey in the same apiary.

#### **WOMEN IN THE APIARY.**

The question of woman's help in apiaries was next discussed.

Dr. Mason would rather not have the women around, while F. A. Eaton could not get along without the help of his wife, as she will do the work up in better shape than he would. While he is doing the heavy work, his wife puts foundation in sections, and does a great deal of other light work.

H. F. Moore finds that women are the best hands to keep things in order.

Dr. Mason knows that women are a wonderful help, but, to be serious about it, many men are killing their wives to keep from hiring, and he thought too much of his wife for that—except, perhaps, at swarming time.

Dr. Miller said that if he goes to an out-apiary without the women, he cannot find anything, and when he wants to go home, all the tools are scattered around the yard. Women straighten things up better than men do, and keep them in better shape.

A recess of ten minutes was then taken, after which the President, Mr. H. R. Boardman, being present, called the convention to order, and appointed the committees.

A. I. Root then addressed the convention, his topic being,

#### **SHALL WE ATTEND CONVENTIONS?**

Mr. Root believes most heartily in attending conventions, because it pays. Even though it does not always pay in dollars and cents, it pays to get away from cares and business—to get acquainted with those engaged in the same pursuit. We also forget self. He used to think that we ought to stay at home, but Prof. Cook got him out of that notion, and he finds now that he was mistaken.

If you attend, take a part in the discussions, and learn to talk—he was formerly bashful, but had gotten over it. He had been accused of talking too much, but that did not offend him. He related how Prof. Cook, at a Michigan convention, made each person present in turn say something on the subject which was being considered, and he thought that it was a good plan. He would also make the question-box a prominent feature of the convention.

A short discussion followed, in which Dr. Miller urged those who attend

conventions to speak plainly—put stress on the consonants, show that you feel what you say. He would not take time to read the minutes, which nearly all have read before.

H. F. Moore said that to make a convention interesting, be there yourself, even though it costs money. The information one gets, pays. Tell your friends to come and participate; they will then thank you.

F. A. Eaton has attended the meetings of this Association for several years, and it has paid him in money value, to say nothing of the gain in the social part of such gatherings.

Dr. Miller, at a convention, saw a little device, from which, he had no doubt, came the T super.

After some miscellaneous business, the convention adjourned to meet at 1:30 p.m. **DEMA BENNETT, Sec.**

## CANADA.

### Report of the Haldimand Bee-Keepers' Convention.

The annual meeting of the Haldimand, Ont., Bee-Keepers' Association was held at Cayuga, on March 22, 1890. In the absence of the President, Mr. James Jack was called to the chair. The minutes of the last meeting were read and confirmed.

Among the subjects discussed was,

#### SPRING MANAGEMENT OF BEES.

Mr. Kindree said that the best way to manage for spring, was to see that the bees had plenty of honey in the fall. He favored crowding the bees on as few frames as possible, and keeping them warm.

Mr. Rose agreed with Mr. Kindree as to crowding bees on a few frames, and keeping them warm; he did not approve of spreading combs too early. Packing in the spring is of more importance than in the fall.

The chairman said that he had not much experience in spring management, but gave the plan of others.

The election of officers resulted as follows: President, Frank Rose; Vice-President, Wm. Kindree; Secretary and Treasurer, E. C. Campbell; and Directors, James Armstrong, Israel Overholt, John Bell, Robert Coverdale, and F. Mehlenbacher.

#### REARING QUEENS—INCREASE.

Mr. Coverdale asked whether it was advisable to start to rear queens in April so as to divide and make new colonies? The general opinion of the meeting was against the practice.

Mr. Overholt asked for the best way to prevent increase of swarms. Mr. Rose said that his plan was to put on extra stories, giving them plenty of

room, and putting two swarms into one hive.

It was decided that this Association affiliate with the Ontario Bee-Keepers' Association, and that the Secretary be instructed to send \$5 to the Secretary of the latter Association.

The next meeting of this Association will be held at Cayuga, on Saturday, May 17, at 1 o'clock.

**E. C. CAMPBELL, Sec.**

## BEGINNING.

### An Experience in Commencing to Keep Bees.

Written for the American Bee Journal  
BY J. P. SMITH.

The beginner has to commence at the foot of the hill, and learn by experience. True, he should have some knowledge of bees and their ways, in order to begin. He needs to read "Bees and Honey," or some other good bee-book, and should take one or more bee-periodicals.

For about eight years previous to 1886, I had tried to keep bees in box-hives, but I failed to keep them. Part of the time I would have some, and then again some spring would open and find me destitute. I would then buy a colony or two more. I continued thus until the summer of 1886, which found me entirely without bees, and about as destitute of bee-knowledge. There were none but brown or German bees anywhere in this vicinity, and none but box-hives. If I could succeed, any one may. I had one qualification, however, that may be deemed requisite, viz: I had a hungering and thirsting for a knowledge of bees and their habits.

In the midst of these surroundings, I began to read the AMERICAN BEE JOURNAL, and from it came the first ray of light. I learned of the book, "Bees and Honey," written by Thomas G. Newman, which I procured, when more light came.

A neighbor offered me the bees from two colonies that he was going to brimstone for the honey. I then bought two movable-frame hives, with necessary fixings to begin bee-keeping, including a bee-smoker. By the time I had the "transferring tools" all together, it was Sept. 25. I read that "June is the month of swarming, and the best time to transfer bees from the common to movable frame hives is about the season of swarming;" but, late as it was, I loaded the tools into a wagon, and started for the bees.

With unpracticed hands, in an awkward way, I succeeded in filling the frames with empty combs, the owner reserving all the honey. I left them

on the old stands to fasten the combs in the frames, and in three days I brought them home, taking off the "wired sticks," as the combs were well fastened. I prepared some feeders, and sugar syrup, by taking eight pounds of granulated sugar to two quarts of soft water, and bringing it to a boil over a slow fire, skimming it, and being sure not to burn it. I fed it at night, both at the entrance and on top of the frames.

I next got a blank book for a "bee-register." On the first page I entered "No. 1; transferred Sept. 25, 1890." On the fifth page I entered "No. 2; transferred Sept. 25, 1886." I marked the hives to correspond. These hives have not been empty since, and the bees in them are in good condition.

Using the smoker, I examined the colonies occasionally, watching the increase of stores, until each had 30 pounds of nicely capped honey. About Nov. 10, I surrounded the hives with a box six inches larger on all sides than the hives, preparing a winter passage out from the entrance. I put Hill's device on top of the frames, covering them with burlap, and a chaff cushion six inches thick. I filled the space between the hive and the outside box with wheat chaff (I deem dry planer shavings just as good), and left them on the summer stands for the winter.

Sunapee, N. H.

## MIGRATION.

### Experience with Migratory Bee-Keeping on the Mississippi.

Written for the American Bee Journal  
BY BYRON WALKER.

It appears from certain articles recently published in the AMERICAN BEE JOURNAL, that several parties, at least, are becoming somewhat concerned as to the out-come of my migratory scheme. Having already presented my views at length, while this topic was the special one for discussion in the Review, I have no desire to discuss the subject further at this time. Still, certain statements with regard to my doings in the past, and intentions in the future, on the part of these correspondents seem to require some explanation by me.

On page 145, Mr. M. M. Baldridge, in commenting on this migratory enterprise as conducted by me last season, concludes that it has resulted in failure, compared with what might have been the result, had the same number of colonies been purchased in Wisconsin instead of Tennessee, since I only secured some 9,500 pounds of honey—about two-thirds comb—from about 100 colonies, at an expense of

\$700, including first cost of bees, while he obtained about 7,000 pounds of extracted honey from 50 colonies. True, he obtained a larger ratio of increase than I did, but as bees worked for extracted honey do not commonly winter as well as those worked for comb honey, the difference in this respect will not be apt to be an important item.

Perhaps the figures given justify Mr. B's conclusion; if so, I fail to see why, especially as his bees were located (if I am correct) on a selected, unoccupied location, while mine, at both ends of the route, were almost of necessity placed on preoccupied ones.

In writing upon this subject before, I gave my reasons for the partial failure of this venture; but while Mr. B. has read these, he has seen fit in writing up this matter, to ignore them altogether, while at the same time he would have us believe that he, a veteran specialist, while handling but 50 colonies of bees, allowed half of the harvest to be wasted.

Again, Mr. B. tells us that it will not pay to make more than one move in shipping bees from New Orleans to Wisconsin; and that this becomes *absolutely necessary* (Italics are mine) because of the loss in bees and brood incident to the journey. Now I can conceive that this might be true, if the colonies shipped were not provided with water, and the shipment delayed until the hot weather that comes in May, in that latitude (as Mr. B. thinks best); as under these conditions, the long confinement, and constant jarring, inseparable from such a trip by rail, could hardly result otherwise than in depleted colonies.

Mr. Stevenson, of St. Charles, Mo., who has had not a little experience in this direction, prefers (if I mistake not) to ship early in April, after the main harvest from willow has been secured. This would give plenty of time to stop in Arkansas or southern Tennessee for the poplar flow, even when shipping by boat; and as the weather is then far more favorable for shipping, and the distance in this case being only about one-third as great, the liability of loss is not an important factor. In fact, if the bulk of the old bees are sent in cages in advance, by express, this risk would be trifling indeed; and as a much larger number of colonies in this event can be safely sent in a given compass, the expense would not be much greater. What would be true in this instance, would also apply to other moves, to points further north, to secure other harvests.

By the by, I fail to understand how Mr. B. reconciles the very positive statement given above, with that made in a letter which I now have before

me, bearing no very ancient date, in which he favors two stops instead of one—the first in Tennessee or Kentucky, and the second, and final one, in Illinois or Wisconsin. Mr. B. says further: "It is Mr. Walker's idea to come up the Mississippi by boat, to catch the honey-flow *along the route* to Wisconsin (Italics are mine). When he has gone through the mill, as I and some others have," etc. No doubt "the mill" referred to was the floating one started by C. O. Perrine, through which we are told that he succeeded in running \$5,000 in cash and 2,000 colonies of bees on its trial trip. Well, I am happy to say that I had nothing to do with that ill-conceived and worse executed project; and fail to see what bearing it can have on one that is properly planned and conducted.

My reasons for regarding the plan of moving bees up this river by boat for securing different harvests, as a practical one, have been published, and need not be repeated here. I will simply say that the plan included only one more stop than Mr. B. favored, but proposed starting a month earlier than he would.

But Mr. B's rehearsal of my proposed plan of procedure, it seems, has had the effect of arousing the ire of other correspondents. Mr. Ehl, on page 219, from the somewhat vehement language used in freeing his mind on this subject, has evidently already caught a view of a huge boat-load of bees fitted up expressly to take the honey-flow *all along the river*—an expression that he does not hesitate to construe in its most literal sense.

Now I wish to say for Mr. E's benefit, that the reason why Mr. Walker cannot stay at home and make the business pay, is because a once first-class home location has of late (like the one Mr. E. speaks of leaving) become "no good for bees." This is partly because too many have been anxious to share its benefits with me (there being now some 700 colonies on the range), and partly because of terrible fires devastating the country.

No, I can assure Mr. Ehl, that I have suffered too much from other apiarists locating on my range, to willingly interfere with others in like manner—even though self-interest should fail to teach me better; and I trust that it will be a relief to Mr. E. to learn that it is not a part of my plan to make even one stop in the whole State of Iowa—except, perhaps, to buy a few tons of honey, as is my custom each year; and as the parties of whom I bought last year in Wisconsin, expect me to buy their crops again the coming season, I may not stop at all.

Capac, Mich.

## CONVENTION DIRECTORY.

### 1890. Time and place of meeting.

- May 1.—Southwestern Wisconsin, at Boscobel, Wis.  
Benj. E. Rice, Sec., Boscobel, Wis.  
May 3.—Susquehanna Co., at Hopbottom, Pa.  
H. M. Sealey, Sec., Harford, Pa.  
May 7.—Capital, at Springfield, Ills.  
C. E. Yocom, Sec., Sherman, Ills.  
May 7, 8.—Texas State, at Greenville, Tex.  
J. N. Hunter, Sec., Celeste, Tex.  
May 17.—Haldimand, at Cayuga, Ont.  
E. C. Campbell, Sec., Cayuga, Ont.  
May 20.—Northern Illinois, at Cherry Valley, Ills.  
D. A. Fuller, Sec., Cherry Valley, Ills.  
July 17.—Carolina, at Charlotte, N. C.  
N. P. Lyles, Sec., Derita N. C.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

## SELECTIONS FROM OUR LETTER BOX

### Afraid of Spring Dwindling.

Bees have wintered well in this section, owing to the unusually mild winter; but the spring, so far, is as severe as we are accustomed to. March was, as usual, full of cold winds; we had the heaviest fall of snow and the coldest weather during its blusters, and although we did not get "six weeks sleighing in March," we did get a little ice, and it was a *little*—not exceeding six inches in thickness. I have 51 colonies of bees in good condition out of 54 packed on the summer stands last fall. We are afraid of "spring dwindling," as the mercury continues so low (below freezing today), and we have so much north wind. I hope for a prosperous season.

CLARENCE W. WILKINS.

Cortland, N. Y., April 11, 1890.

### Salt for Getting Rid of Ants.

On page 172, John H. Christie speaks of ants being very troublesome. He wishes that preserve and honey stands were made with a little cup around the stand that will hold a spoonful or so of coal-oil, so that it will keep out the ants. In my opinion, coal-oil should never be placed near honey, especially upon the same glass vessel. If you want to try such an experiment, place the preserve or honey stand in a plate with a little coal-oil in the plate, and see what the results will be.

I will give a recipe for keeping away ants—a recipe that I give to all to whom I sell honey; it should be on every honey-label. It is this: Spread a little salt on the floor or shelf before placing upon it the honey, milk, butter, lard, or any thing that ants will bother, and they will never find it. I hope that this will be of some benefit to Mr. C. and his customers, as well as to many others, for ants should never stand in the way of selling honey. Also, where ants are troublesome about the hives in early spring, a little salt will make them leave quickly. Salt will not injure honey as coal-oil would. I eat salted butter with honey, and it adds to the flavor of both. All who are subject to honey-cramp, may add a little salt to their honey while eating, and receive no bad effects from it. My bees are ready for the honey when it comes. They wintered without any loss.

J. M. PRATT.

Todd's Point, Ky., April 7, 1890.

**Symptoms of Diseased Bees.**

In the spring of 1882 I had the same experience as Mr. A. D. Ellingwood describes on page 220, and all of my bees were wintered on the summer stands. I do not put my bees into the cellar. In examining the combs and honey, I found that the honey and bee-bread was sour, and the honey consisting mostly of sugar-cane juice and apple cider. Mr. Ellingwood's hives might have been damp, and thus caused the honey to sour; and his bees may have spring dwindled, or had the diarrhea. My bees looked as if they were swelled, and sleek, as if they had grease poured on them; when they came out of the hives, they wanted to take their flight, and they could not fly, but hopped from the hives like grasshoppers; they would not tolerate invalids in their homes. I would like to have Mr. Ellingwood tell us the symptoms of his bees, as I am anxious to know.

JULIUS J. PETTY.

Independence, Ky.

[Mr. Ellingwood is invited to reply to the above in the BEE JOURNAL.—ED.]

**Experience in Bee-Keeping.**

I began with 4 colonies in the spring of 1889, and got 8 swarms from them. The season was a poor one, as all the early blossoms were killed by frost on May 28, and my bees did little more than gather honey enough for brood-rearing until late, but they gathered enough for winter stores from that much-abused plant—the golden-rod. I wintered them on the summer stands, in chaff hives, and they have all come through strong. I shall increase by dividing, the coming season, as I believe that I get stronger colonies by so doing. I will, in due time, report the result of my experiments.

N. L. SAULSBURY.

Batavia, N. Y., April 12, 1890.

**Wet and Cold Seasons.**

For the last two years—1888 and 1889—bee keeping was in east Pennsylvania merely a failure. The last two summers it was too wet and too cold, and only a small honey-flow. Last summer my bees stored nearly 200 pounds of comb honey, and the greatest part of it was from buckwheat. I have wintered 18 colonies on the summer stands, and all, so far, have wintered well. I lost 2 colonies—one by starvation, and one by being queenless. Bees are just now busy carrying in pollen on warm days, but the weather is cold and wet, and it seems very likely that bee-keeping will be a failure the coming season, but I hope for the best. I have been interested in bee-keeping for nearly 30 years, but I never saw such cold and wet weather during all summer, as it was in 1889, and nearly the same in 1888; and now it looks as though the coming summer will be the same.

P. W. FLORES.

Dillingsville, Pa., April 12, 1890.

**Successful Wintering of Bees.**

I have been very successful in wintering bees. I put 31 colonies (all in good condition except one that was queenless) into winter quarters last fall, packed in corn chaff from the elevator. I made a box 16 feet long, 26 inches deep, and 26 inches high at the back, and 30 inches in front, leaving the front open until the bees are in. The bottom I make of 2x6 inch pieces, nailing the floor on the underside, and fill to the top of the 2x6 pieces with chaff, and place the hives on this, side by side, packing every space between, behind and above with chaff. Before putting the bees away,

I remove the combs from the upper part of the hive, and use a device to allow the bees to pass above the frames. I put about 4 to 6 inches of chaff over the bees in the upper part of the hive; I then close the front of the box, leaving about 6 inches at the entrance open, and keep this filled with straw or hay in bad weather. One box holds 9 to 11 hives. I have taken out 90 colonies (the queenless one, of course, died) in excellent condition—I think that they are the strongest that I ever saw at this time of the year. If we have dry weather this month, I will have to feed some, but if the clover yields honey, my bees will be ready for it. They have been carrying in native pollen for a week. I did fairly well with them last year, as they netted me a little over \$5 per colony, above all expenses.

I would not do without the AMERICAN BEE JOURNAL even if I did not keep bees. It is always full of good common-sense.

Milo, Iowa, April 9.

B. A. MANLEY.

**Spray from Flying Bees.**

Mr. S. J. Youngman, after some very kind words on page 250, asks about the mist or spray that he has seen fall from bees as they were returning to their hives. I have often watched for such showers, but have never yet seen them; but I have no doubt that he has. Such drops must be the excreta of the bees. They cannot come from the bees' mouths. We must remember that the sugar of nectar is dissolved in water, and can only be reduced by evaporation. This cannot take place in a closed cavity like the honey-stomach; and wonderful as the bee is, we cannot believe that she has any process by which she can separate the water from the sugar, in the stomach. She must put it into the cell, and let the heat of the hive reduce it.

While the bee is going to the hive, the nectar is being "modified" into honey; that is, the cane sugar is converted into reducible sugar, so that it can be absorbed easily without any digestion when eaten. I think that no other change occurs.

A. J. COOK.

Agricultural College, Mich.

**Keeping Bees in Washington.**

I am not sure that this is a good bee-county, but I am told by persons who have lived here for years, that bees do wonderfully well here, and the honey produced is of the finest quality. I have found but few bees as yet, and I do not think that there is a single practical apiarist in this part of the land. This far-off country is a "wonderland," and is not without great advantages, and the most wonderful scenery. Blaine is situated in the northwest corner of the new State of Washington, just south of the British line, and on the east shore of Georgia Bay, of the great Puget Sound. It is a town two years old, and has a population of nearly 1,000; it is now on a wild boom, and it would be hard to find a person here that would not rather have a town lot in Blaine, than the finest apiary in America. As for myself, I would not object to having a few good lots, but I would like, also, to have a good apiary here, as honey is scarce, and brings a good price—from 20 to 25 cents per pound for comb honey. There is no extracted honey in the market. I think that is a good place for clover; I find both white and Alsike growing on every foot of ground where it has a chance, and it never winter-kills or dries out here, but there may be too much dampness and cool weather for the production of honey. I shall test the matter the coming summer, and send a report next fall.

JOHN I. MARTIN.

Blaine, Wash., April 7, 1890.

**Supers and their Improvements.**

Mr. Baldrige's article and quotations on page 232, incited me to one more effort by way of an improvement on what I thought was good enough. Last season I used 200 of the supers that Mr. Baldrige's correspondent refers to. True, there was some propolis at the upper corners of the sections, but the super, as a whole, was so much superior to anything that I had ever used before, that I did not consider it objectionable, but I found that I made more allowance for the T tins than was necessary, and I now have them so close fitting that there is little space left in which the bees can put propolis. The result of my effort as an improvement, I send to the BEE JOURNAL Museum to-day. It has two wooden thumb-screws on one side, and another on one end, which screw against thin boards placed between the body of the sections and the parts of the super through which the screws work. By this arrangement, the sections are held securely in place, and by loosening the screws, a single section can easily be removed; or, by reversing the whole super before unscrewing, the entire body of sections can be quickly taken out all together. The supports that I use in connection with the screws, will not sag; the sections are held absolutely close together; the super can be used with, or without, separators; any single section or row of sections can be readily removed or interchanged, or the entire super can be emptied *en masse*; and the sections are kept absolutely square, and the ends and edges free from propolis.

GEO. E. HILTON.

[The super is received and placed in our Museum, as requested. It is substantially as described by Mr. Hilton, and will no doubt prove to be useful and convenient. We can discover but little, if any, difference between this super and the one which Mr. Bull describes on page 278.—ED.]

**Wintered Well—Mites on Birds.**

I began the season of 1889 with 37 colonies, and took 2,500 pounds of comb honey, but lost about two weeks of the best of the honey-flow on account of shortage in sections. I increased to 70 colonies, 3 of which were queenless, they killing every queen that I attempted to introduce. The balance I put out on April 8, in good condition. Everything here has the appearance of a good season for 1890. I would like to know how to get rid of mites, or little insects, on canary birds. We bee-folks are bothered with them, and would like to know a remedy that is sure, and will not damage the birds. We get so much information from the BEE JOURNAL on bee-matters, that I venture to ask in regard to this.

MRS. L. J. KEYES.

Nora Springs, Iowa, April 14, 1890.

[Perhaps some of our bird-fanciers will answer this question. We know only of simple remedies like sulphur, red-pepper, etc.—ED.]

**Much Loss in Wintering.**

Bees in this section of the country have not wintered well, great losses having been sustained by many—some lost every bee they had. I have, so far, only 17 colonies left out of 142, and they are weak, at that. It is claimed that the fall honey gathered from wild buckwheat, etc., contained poisonous substances, causing the bees to die with the diarrhea.

STEPHEN ROESE.

Maiden Rock, Wis., April 16, 1890.



ALFRED H. NEWMAN,  
BUSINESS MANAGER.

## Business Notices.

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Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

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Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price \$1.00 per hundred, with name and address printed. Sample free.

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The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

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What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, has ruined more stomachs than alcohol. A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.  
51D26t 1mly.

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office. The price is 25 cents, postpaid.

Clubs of 5 for \$4.00 to any addresses. Ten for \$7.50, if all are sent at one time.

## HONEY AND BEESWAX MARKET.

BOSTON, April 19.—Market is strong and well cleaned up on all fancy 1-lbs., at 16c. A small quantity of 2-lbs. on hand sells at 15c. Extracted, 8@9c. No Beeswax on hand. No off grades in any way can be sold here.

BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, April 8.—Comb honey has sold well lately—there is practically none on the market, it being taken soon after arrival, if in desirable shape. Consignments that have hung along all winter have been closed out at 12@13c. for good, and 14c. for fancy. Extracted is dull at 6@8c. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, April 8.—Demand good, and supply fair. We quote: White 1-lbs., 12@13c.; very fine, 14c.; medium, 11@12c.; dark and old, 9@10c. Extracted, white, in barrels and 1/2 barrels, 7 1/2@8c.; in tin and kegs, 7@8 1/2c.; dark, in barrels and 1/2 barrels, 6 1/2@7c. Beeswax, 23@26c.

A. V. BISHOP, 142 W. Water St.

CHICAGO, April 8.—We quote: White clover in active demand, and receipts find ready sale; 1-lbs., 13@14c.; 2-lbs., 12@12 1/2c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 6 1/2@7 1/2c. Beeswax—bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 7.—Supply of white 1-lbs. is very limited—10,000 or 20,000 lbs. more of fancy comb in 1-lb. sections would find a market here before the new crop comes. Extracted sells very slowly. We quote: Fancy 1-lbs., white, 13c.; choice 1-lbs., 12c. Fall amber 1-lbs. and 2-lbs., 9@10c. Choice white 2-lbs., 11@12c. Extracted, white, 7c.; amber, 5@6c. No Beeswax in the market.

CLEMONS, CLOON & CO.,  
Cor. 4th and Walnut Sts.

KANSAS CITY, Mo., April 5.—The market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.; dark 2-lbs., 8@9c. Extracted, white, 6@6 1/2c.; dark, 5c. Demand good.

HAMBLIN & BEARSS, 514 Walnut St.

DENVER, April 9.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 22@25c.

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, April 10.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 26@27c.

M. H. HUNT, Bell Branch, Mich.

CINCINNATI, April 9.—Demand good for choice white comb honey at 12@15c.; dark is very slow sale. Extracted is in good demand at 5@8c. Stock is low.

Beeswax is in good demand at 22@25c. for good to choice yellow. C. F. MUTH & SON,  
Corner Freeman & Central Aves.

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I have received the Bingham Smoker in first-class order. I have given it a fair trial, and I am well pleased with it. Accept my thanks for your prompt returns.  
—R. J. SWIFT, Blasdel, N. Y.

**The Time for Spring Work** will soon be here, and those who need a guide for all the operations in the apiary, should procure a copy of Dr. Miller's book entitled "A Year Among the Bees." Its descriptions commence with the necessary work in the spring, and run through the entire year, detailing the methods of doing, as well as telling when to do, all that should be done in the apiary. We have only a limited number of copies left, and those who want it should send for it at once. We will hereafter mail it, bound in cloth, to any address for 50 cts., until all are gone.

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This plant has been commended by some of the most experienced bee-keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, postpaid, at the following prices: Single ounce, 40 cents; 4 ounces, \$1.00; 10 ounces, \$2.00; or one pound for \$3.00.

**Handling Bees.**—This is the title of a nice pamphlet containing 28 pages and a cover, just issued by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

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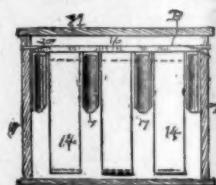
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**\$1.50 Double Walled Hive.**

I MAKE my improved Space with the downward-extending arms nearly as long as the end bars of the frames; and with suitable division-boards in place of the outside combs; a hive is converted into a double-walled hive, with the spaces at the ends of the frames closed, which is a great aid to a weak colony in building up in the spring. If the hive is well-packed on top of the frames. Price of Brood-Chamber and 8 Frames, \$1.50; one Hive and one doz. extra Spacers, \$4.00. Spacers, long or short arm, \$20.00 per 100. These prices are for Frames 1/2-inch wide. When ordering give the width of your hive inside. **J. B. WILCOX, Manistee, Mich.**  
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